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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,145	09/30/2003	Fernando C. M. Martins	884.726US1	3926

21186 7590 02/27/2008
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EXAMINER	
RYAN, PATRICK A	
ART UNIT	**PAPER NUMBER**
2623	
MAIL DATE	**DELIVERY MODE**
02/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/677,145	Applicant(s) MARTINS, FERNANDO C. M.	
	Examiner PATRICK A. RYAN	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 September 2003.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-53 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-53 is/are rejected.

7)☒ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 30 September 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is the First Office Action based on application 10/677145 filed September 30, 2003. As originally filed, Claims 1-53 are presented for examination.

Claim Objections

2. Claims 15, 23, 25, 26, and 31 objected to because of the following informalities:

3. Claim 15 recites "storing the meta-data by the a receiver." articles "the" and "a" can not modify the noun "receiver" at the same time (one or the other must be chosen), the Examiner requests "the" be deleted since this is the first time "receiver" is mentioned in the independent claim.

4. Claim 23 recites the limitation "the biometric identification device" as dependent from Claim 20. The Examiner points out that Claim 22 provides antecedents for Claim 23 by reciting the limitation "a biometric identification device" (not Claim 20). The Examiner suggests that Claim 23 be made dependent from Claim 22 in order to provide proper antecedent basis.

5. In regards to Claim 25, the word "is" should be added between the words "sensor" and "in" to read as follows: "...the sensor is in physical contact..."

6. Claim 26 should recite "An apparatus", not "A apparatus".

7. Claim 31 is directed toward a method as dependent from Claim 26, which is an apparatus claim. The Examiner suggests that Claim 31 be changed to an apparatus claim in order to provide continuity in the chain of dependency.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 8, 9, 10, 11, 12, 32, 34, 35, 37, 48, 52, and 53 are rejected under 35 U.S.C. 102(e) as being anticipated by Obrador US Patent (6,585,521 B1).

10. In regards to Claim 1, Obrador teaches a computerized method comprising receiving data representing a user's reaction to digital content (method of video indexing based on viewers' behavior and emotion feedback, as shown in Fig. 7 and described in Col. 7 Lines 22-45); and generating through computer automated operations meta-data based on the user's reaction (blocks 730 and 740 of Fig. 7, as described in Col. 7 Lines 29-34).

11. In regards to Claim 8, Obrador teaches the method of Claim 1 wherein receiving data representing the user's reaction further comprises receiving data representing nonverbal communications (image sensor 110 of video camera 130 "for capturing facial expressions and physical movement of the viewers", as disclosed in Col. 3 Lines 43-46, with further reference to Col. 5 Lines 64-67 and Col. 6 Lines 1-26).

12. In regards to Claim 9, Obrador teaches the method of Claim 8 wherein the data representing nonverbal communications is data representing facial gestures (image

sensor 110 of video camera 130 "for capturing facial expressions and physical movement of the viewers", as disclosed in Col. 3 Lines 43-46, with further reference to Col. 5 Lines 64-67 and Col. 6 Lines 1-26).

13. In regards to Claim 10, Obrador teaches the method of Claim 8 wherein the data representing nonverbal communications is data representing gazing patterns of the user (a lack of interest may be indexed if the viewer is not looking at the display, as disclosed in Col. 4 Lines 20-23).

14. In regards to Claim 11, Obrador teaches the method of Claim 1 wherein the receiving data representing the user's reaction further comprises receiving data representing verbal communications (audio sensor 120 may be a microphone for capturing an audio signal in the viewers voice, as disclosed in Col. 3 Lines 47-49, with further reference to Col. 6 Lines 27-67).

15. In regards to Claim 12, Obrador teaches the method of Claim 11 wherein the data representing verbal communications comprises data representing speech patterns (emotion detection system 100 may use audio signals in the viewers' voice, such as laughter to categorize the video segment, as disclosed in Col. 3 Lines 31-36).

16. In regards to Claim 32, Obrador teaches an electronic system (computer 140 of Fig. 2) comprising: a memory to store instructions for annotating digital content (memory 202, as described in Col. 4 Lines 56-64); a storage device to store meta-data associated with the digital content (secondary storage device 212, as described in Col. 4 Lines 57-61); and a processor programmed to: execute the instructions for annotating

digital content from the memory (processor 214, as described in Col. 4 Lines 61-64), annotate the meta-data with one or more user's responses to the digital content (emotion detection system 100 uses computer 140 to categorize different behavior and emotion segments of a scene, and automatically index the video sequence according to various categories of behavior and emotion, as described in Col. 3 Lines 56-64), and store the meta-data on the storage device (remote storage 150, as described in Col. 3 Lines 60-64).

17. In regards to Claim 34, Obrador teaches the electronic system of claim 32, further comprising one or more devices to collect data representing a user's response to digital content (emotion detection system 100 includes acquisitions devices such as, video cameras 130 and audio sensors 120, as described in Col. 3 Lines 37-54).

18. In regards to Claim 35, Obrador teaches an article comprising a machine-accessible medium having associated data (memory 202, as described in Col. 4 Lines 56-64), wherein the data, when accessed, results in a machine performing: receiving data representing a user's reaction to digital content (computer 140 executing the method for video indexing based on viewers' behavior and emotional feedback, as disclosed in Col. 4 Lines 45-48); and annotating, through computer automated operations, the user's reaction in meta-data associated with the digital content (computer 140 executing the method for video indexing based on viewers' behavior and emotional feedback, as disclosed in Col. 4 Lines 45-48).

19. In regards to Claim 37, Obrador teaches the article of claim 35 wherein the machine-accessible medium further includes data, when accessed by the machine, results in the machine performing transferring the meta-data to a designated location ("computer 140 has a connection with network 160, such as the Internet or other type of computer or telephone networks, for sending recorded multimedia sequences and video indices", as disclosed in Col. 4 Lines 48-51).

20. In regards to Claim 48, Obrador teaches a computerized method comprising automatically consolidating, from across a network, a plurality of meta-data describing a plurality of user's responses to digital content ("indexed multimedia sequences may be saved on a server to be retrieved by other users by browsing through particular behavior or emotional segments of multimedia", as disclosed in Col. 5 Lines 56-63).

21. In regards to Claim 52, Obrador teaches the computerized method of claim 48 further comprising analyzing verbal communication delivered in the form of digital content, the analyzing performed using user responses to the digital content annotated in the meta-data (audio sensor 120 may be a microphone for capturing an audio signal in the viewers voice, as disclosed in Col. 3 Lines 47-49, with further reference to Col. 6 Lines 27-67. In addition, emotion detection system 100 can categorize various categories of audio feedback within a video sequence 680, such as the "speech" segment 620 of Fig. 6, as disclosed in Col. 7 Lines 4-13).

22. In regards to Claim 53, Obrador teaches a the computerized method of Claim 48 wherein the consolidated meta-data provides an automatic ethnographic ranking system

for digital content (Obrador discloses "video indices of behavior and emotion feedback may be labeled, for example, as "happy #1", "funny #2", or "interesting #4", within the video sequence for easy indexing" from Col. 6 Lines 23-26. In addition, indexing may be done in a hierarchical representation, as disclosed in Col. 6 Lines 46-48).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

24. Claims 2, 3, 15, 16, 17, 18, 21, 26, 27, 28, 29, 31, 33, 36, 45, 46, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Lu et al US Patent (5,771,307) hereinafter "Lu."

25. In regards to Claim 2, Obrador teaches the method of Claim 1, but does not teach the method further comprising receiving data identifying a user.

In a similar field of invention, Lu teaches a method for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. Lu's method establishes a reference facial image, which is used as reference to compare to a current image. When the images are determined to be the same, the user is uniquely identified.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the user identification method of Lu because "if the individual members of a sample household are not uniquely identified, the various demographic information usually provided in viewing reports is not, generally speaking, readily ascertainable" (as disclosed by Lu in Col. 2 Lines 43-46). Therefore, by uniquely identifying a user in the monitoring system a more accurate and personalized profile is established.

26. In regards to Claim 3, Obrador and Lu teach the method of Claim 2, further comprising generating a ranking of one or more items of digital content based on the reaction of one or more users to the digital content (Obrador discloses "video indices of behavior and emotion feedback may be labeled, for example, as "happy #1", "funny #2", or "interesting #4", within the video sequence for easy indexing" from Col. 6 Lines 23-26. In addition, indexing may be done in a hierarchical representation, as disclosed in Col. 6 Lines 46-48).

27. In regards to Claim 15, Obrador teaches a method comprising collecting the user's reactions to digital content (method of video indexing based on viewers' behavior and emotion feedback, as shown in Fig. 7 and described in Col. 7 Lines 22-45); generating meta-data associated with the digital content based on the user's reactions (blocks 730 and 740 of Fig. 7, as described in Col. 7 Lines 29-34); and storing the meta-data by a receiver (indexed sequences may be transmitted to the network 160 and/or

the remote storage 150 to be stored, as disclosed in Col. 3 Lines 56-62). Obrador does not teach the limitation of identifying a user of digital content.

In a similar field of invention, Lu teaches a method for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. Lu's method establishes a reference facial image, which is used as reference to compare to a current image. When the images are determined to be the same, the user is uniquely identified (Lu Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the user identification method of Lu because "if the individual members of a sample household are not uniquely identified, the various demographic information usually provided in viewing reports is not, generally speaking, readily ascertainable" (as disclosed by Lu in Col. 2 Lines 43-46). Therefore, by uniquely identifying a user in the monitoring system a more accurate and personalized profile is established.

28. In regards to Claim 16, Obrador and Lu teach the method of Claim 15 further comprising transferring the meta-data from the receiver to an originator (Obrador discloses that indexed video sequences may be transferred to network 160 or remote storage 150, as disclosed in Col. 4 Lines 56-60. In addition, network 160 may be "the Internet or other type of computer or telephone networks, for sending recorded multimedia sequence and video indices to friends and family by, for example, email", as disclosed in Col. 4 Lines 48-52).

29. In regards to Claim 17, Obrador and Lu teach the method of Claim 15 further comprising transferring the meta-data from the receiver to a location identified by the originator (Obrador discloses in Col. 4 Lines 48-52: network 160 may be "the Internet or other type of computer or telephone networks, for sending recorded multimedia sequence and video indices to friends and family by, for example, email." Therefore, using Obrador's example of email, a user may inherently address the email with attached multimedia content to any other user with a valid email address).

30. In regards to Claims 18 and 21, Onrador and Lu teach the method of Claim 15 wherein identifying a user is performed using an electronic identification devices (Lu teaches a method for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. Lu's method establishes a reference facial image, which is used as reference to compare to a current image. When the images are determined to be the same, the user is uniquely identified. Image capturing is preformed by video cameras 32 and 34, as described in Col. 9 Lines 1-20). Additionally, Onrador and Lu teach that the electronic identification device is remote from the user (Lu's method teaches video cameras 32 and 34 are located in video equipment module 18, as disclosed in Col. 9 Lines 21-23. In addition, from Fig. 1, it can be seen that video equipment module 18 is on top of television set 12 and clearly at remote location from users 24 and 26).

31. In regards to Claim 26, Obrador teaches an apparatus comprising: a mechanism to collect the user's responses to the digital content (emotional detection system 100 of

Fig. 1A, as described in Col. 3 Lines 37-64); a mechanism to generate a plurality of meta-data associated with the digital content based on the user's responses (emotion detection system 100 may combined facial expressions and the viewer's voice to categorize a video segment, the categorized video segment may then be used to index the video sequence, as disclosed in Col. 4 Lines 9-28); and a mechanism to transfer the plurality of meta-data generated throughout a network to a location identified by an originator (network 160 may be "the Internet or other type of computer or telephone networks, for sending recorded multimedia sequence and video indices to friends and family by, for example, email." as disclosed in Col. 4 Lines 48-52. Therefore, using Obrador's example of email, a user may inherently address the email with attached multimedia content to any other user with a valid email address). Obrador does not teach a mechanism to identify a user of digital content.

In a similar field of invention, Lu teaches a video equipment module 18, as described in Col. 9 Lines 1-40, for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. Computing system 52 establishes a reference facial image, which is used as reference to compare to a current image. When the images are determined to be the same, the user is uniquely identified (see functional bock diagram of Fig. 3, with further reference to Col. 10 Lines 22-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the emotional detection system of Obrador with the video equipment module of Lu because "if the individual members of a sample household are not uniquely identified, the various demographic information usually provided in viewing reports is not, generally speaking, readily ascertainable" (as disclosed by Lu in Col. 2 Lines 43-46). Therefore, by uniquely identifying a user in the monitoring system a more accurate and personalized profile is established.

32. In regards to Claim 27, Obrador and Lu teach the apparatus of Claim 26 wherein the location identified is the location of the originator (Obrador discloses that indexed video sequences may be transferred to network 160 or remote storage 150, as disclosed in Col. 4 Lines 56-60. In addition, network 160 may be "the Internet or other type of computer or telephone networks, for sending recorded multimedia sequence and video indices to friends and family by, for example, email", as disclosed in Col. 4 Lines 48-52).

33. In regards to Claim 28, Obrador and Lu teach the apparatus of Claim 26 wherein the mechanism to identify a user further comprises one or more electronic identification devices (Lu teaches a video equipment module 18, as described in Col. 9 Lines 1-40, for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. The images used to identify the user are acquired using cameras 32 and 34, as described in Col. 9 Lines 1-20).

34. In regards to Claim 29, Obrador and Lu teach the apparatus of Claim 26 wherein the mechanism to identify a user further comprises one or more biometric identification devices (Lu teaches a video equipment module 18, as described in Col. 9 Lines 1-40, for identifying a user based on aspects such as, body shape matching, viewer tracking,

and/or historical data. The images used to identify the user are acquired using cameras 32 and 34, as described in Col. 9 Lines 1-20).

35. In regards to Claim 31, Obrador and Lu teach the apparatus of Claim 26 wherein the mechanism to collect the user' response is a device selected from the group consisting of a keyboard, a mouse, a remote control, a touchpad, a joystick, a speech recognition device, a video camera, and a microphone (Lu teaches a video equipment module 18, as described in Col. 9 Lines 1-40, for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. The images used to identify the user are acquired using cameras 32 and 34, as described in Col. 9 Lines 1-20).

36. In regards to Claim 33, Obrador and Lu teach the electronic system of Claim 32, further comprising one or more devices for identifying a user of digital content (Lu teaches a video equipment module 18, as described in Col. 9 Lines 1-40, for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. The images used to identify the user are acquired using cameras 32 and 34, as described in Col. 9 Lines 1-20).

37. In regards to Claim 36, Obrador and Lu teach the article of Claim 35 wherein the machine-accessible medium further includes data, wherein the data, when accessed by the machine, results in the machine performing identifying the user (functional block

diagram of Fig. 2 is performed by computing system 52, as disclosed by Lu in Col. 9 Lines 41-47).

38. In regards to Claim 45, Obrador teaches a system comprising means to collect the user's reactions to digital content (emotional detection system 100 of Fig. 1A, as described in Col. 3 Lines 37-64); means to generate meta-data associated with the digital content based on the user's responses/reactions (emotion detection system 100 may combined facial expressions and the viewer's voice to categorize a video segment, the categorized video segment may then be used to index the video sequence, as disclosed in Col. 4 Lines 9-28); and means to consolidate in a local database the multiple meta-data generated throughout the network ("indexed multimedia sequences may be saved on a server to be retrieved by other users by browsing through particular behavior or emotional segments of multimedia", as disclosed in Col. 5 Lines 56-63). Obrador does not teach a means to identify a user of digital content.

In a similar field of invention, Lu teaches a video equipment module 18, as described in Col. 9 Lines 1-40, for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. Computing system 52 establishes a reference facial image, which is used as reference to compare to a current image. When the images are determined to be the same, the user is uniquely identified (see functional bock diagram of Fig. 3, with further reference to Col. 10 Lines 22-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the emotional detection system of Obrador with the video equipment module of Lu because “if the individual members of a sample household are not uniquely identified, the various demographic information usually provided in viewing reports is not, generally speaking, readily ascertainable” (as disclosed by Lu in Col. 2 Lines 43-46). Therefore, by uniquely identifying a user in the monitoring system a more accurate and personalized profile is established.

39. In regards to Claim 46, Obrador and Lu teach the system of Claim 45 further comprising means to provide a ranking based on the consolidated meta-data (Obrador discloses “video indices of behavior and emotion feedback may be labeled, for example, as “happy #1”, “funny #2”, or “interesting #4”, within the video sequence for easy indexing" from Col. 6 Lines 23-26. In addition, indexing may be done in a hierarchical representation, as disclosed in Col. 6 Lines 46-48).

40. In regards to Claim 47, Obrador and Lu teach the system of Claim 45 further comprising means to browse selected items of digital content based on the meta-data (“indexed multimedia sequences may be saved on a server to be retrieved by other users by browsing through particular behavior or emotional segments of multimedia”, as disclosed by Obrador in Col. 5 Lines 56-63).

41. Claims 4, 5, 6, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Cliff et al US Patent (6,885,304) hereinafter “Cliff.”

42. In regards to Claim 4, Obrador teaches the method of Claim 1, but does not teach wherein the data representing the user's reaction is data representing an individual's reaction.

In a similar field of invention, Cliff teaches a method of monitoring the reaction of people to a performance using two or more monitoring devices of different types. In addition, Cliff teaches a method of "providing one or more first monitoring devices each adapted to provide at least one output signal form which the behavior of an individual reacting to the performance can be estimated" (as disclosed in Col. 2 Lines 54-57).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of obtaining an individuals reaction to a performance, as taught by Cliff, because if an environment provides multiple rooms, each with a different performance occurring, it would be advantageous to identify the reaction of an individual user so that, if multiple users are experiencing different performances, an accurate reaction for each individual would be established.

43. In regards to Claim 5, Obrador teaches the method of Claim 1, but does not teach wherein the data representing the user's reaction is data representing a group's reaction.

In a similar field of invention, Cliff teaches a method of monitoring the reaction of people to a performance using two or more monitoring devices of different types. In addition, Cliff teaches a method of "providing at least one output signal form which the behavior of a plurality of those people reacting to the performance can be estimated" (as disclosed in Col. 2 Lines 58-61).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of obtaining a group reaction to a performance, as taught by Cliff, because the overall reaction of a group of individuals would represent an approximation of the average reaction and therefore be a more effective representation of the individual reactions of multiple individuals, who may have different reactions to the same performance.

44. In regards to Claims 6 and 7, Obrador teaches the method of Claim 1, but does not teach wherein receiving data representing a user's reaction further comprises receiving data representing physiological processes, selected from a group consisting of breathing, heart rate, blood pressure, galvanic response, eye movement, and muscle activity.

In a similar field of invention, Cliff teaches a method of monitoring users' reaction to a performance, which includes monitoring a users' body temperature, perspiration, and pulse rate (as disclosed in Col. 6 Lines 6-24).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of obtaining a physiological reaction to a performance, as taught by Cliff, because "monitoring of these features can also... allow central determination of whether audience members are at risk of endangering their health" (as disclosed in Col. 6 Lines

25-28). Monitoring the physiological processes of a user would therefore insure the safety and wellbeing of the user.

45. In regards to Claim 13, Obtador teaches the method of Claim 11, but does not teach wherein the data representing verbal communications comprise data representing the user's vocabulary.

In a similar field of invention, Cliff teaches a method of detecting one or more keywords spoken by the user. In Cliff's method, a negative response signal may be produced for one keyword and a positive signal for a different keyword (as disclosed in Col. 5 Lines 55-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of obtaining a performance based on a keyword spoken by an individual, as taught by Cliff, because the spoken word would provide a specific reaction of the user and therefore a more accurate interpretation of the user's feelings about the performance can be established.

46. Claims 14, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Eldering et al US Patent (7,150,030 B1) hereinafter "Eldering."

47. In regards to Claim 14, Obtador teaches the method of Claim 1, but does not teach wherein receiving data representing the user's reaction further comprises receiving data representing the user's pattern used to browse the digital content.

In a similar field of invention, Eldering teaches a method of monitoring a user's actions, such as the time duration programming is watched and the volume at which the programming is listened. These user inputs are then used to create program characteristics vectors, which can be used in combination with subscriber selection data to form a subscriber profile (Eldering Abstract). Further more, Eldering's method keeps track of the number of channel changes occurring during the viewing time using a channel change record (as disclosed in Col. 7 Lines 44-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of user input tracking, such as channel change patterns, as taught by Eldering because it is well known in the art that rapid channel changing, or channel surfing, signifies the searching (or browsing) through programs that are not of interest. Therefore, by tracking the input of a user as taught by Eldering, a determination that a user is channel surfing may be established.

48. In regards to Claim 50, Obrador teaches the computerized method of Claim 48, but does not teach the method further comprising adjusting a price for the digital content in response to the user responses to the digital content annotated in the meta-data.

In a similar field of invention, Eldering teaches a method of monitoring a user's actions to create a user profile. Eldering also teaches providing the user with a discount on a product to service if the user shares their profile with, for instance, an advertiser.

The advertiser can then provide content that is tailored to the likes and dislikes of the user, based on the user profile (as Eldering discloses in Col. 2 Lines 35-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of providing a discount to a user as taught by Eldering because providing the user with a discount for products and services would increase the likelihood of the user to disclose personal information in the profile by providing an incentive.

49. In regards to Claim 51, Obrador teaches the computerized method of Claim 48, but does not teach the method further comprising conducting market research using the user responses to the digital content annotated in the meta-data.

In a similar field of invention, Eldering teaches a method of monitoring a user's actions to create a user profile. Eldering also teaches using average and session household demographic characteristics as an indication of advertisements the household would be interested in watching. Household interest column 1701 of Fig. 17 specifies the types of programming and products which are statistically characterized for a given household (as Eldering discloses in Col. 13 Lines 53-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of program and product characterization as taught by Eldering because this data would indicate "what types of products cold potentially be advertised with a high probability of the advertisement being watched in its entirety" (as disclosed by Eldering in Col. 13 Lines 53-62).

50. Claims 19, 20, 22, 23, 24, 25, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Lu et al US Patent (5,771,307) hereinafter "Lu" in further view of Cliff et al US Patent (6,885,304) hereinafter "Cliff."

51. In regards to Claims 19, and 20, Obrador and Lu teach the method of Claims 15 and 18 wherein identifying a user is performed using an electronic identification device (see Claims 15 and 18 for references regarding these limitations). Obrador and Lu do not teach wherein the electronic identification device is worn or carried by the user.

In a similar field of invention, Cliff teaches a method of monitoring the reaction of people to a performance using two or more monitoring devices of different types. One of these devices is depicted in Fig. 1. In Col. 4 Lines 21-31 and Col. 5 Lines 10-12 Cliff discloses that device 1 may also function as a wristwatch, which is therefore worn by the user. In addition, Cliff discloses in Col. 5 Lines 29-37 that the method of monitoring may also be embodied in a handheld computing device, such as a PDA, which would therefore be carried by the user.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user identification and user reaction method, as taught by Obrador and Lu, with the method of user identification using a portable device, as taught by Cliff, because a portable device in close proximity to the user would provide a an indirect user response by monitoring the users state of well being or physical behavior, as described by Cliff in Col. 5 Lines 41-45).

52. In regards to Claims 22 and 23, Obrador, Lu, and Cliff teach the method of claim 20 wherein the biometric identification device is selected from the group consisting of a fingerprinting device, a voice recognition device, an iris pattern identification device, a retinal pattern identification device, a face recognition device, and a key stroke rhythm detection device (Lu teaches a method for identifying a user based on aspects such as, body shape matching, viewer tracking, and/or historical data. Lu's method establishes a reference facial image, which is used as reference to compare to a current image. When the images are determined to be the same, the user is uniquely identified, see Lu Abstract.).

53. In regards to Claim 24 and 25, Obrador and Lu teach the method of Claim 15, but do not teach wherein collecting the user's reactions is performed using a sensor or wherein the sensor is in physical contact with the user.

In a similar field of invention, Cliff teaches a method of monitoring the reaction of people to a performance using two or more monitoring devices of different types. One of these devices is depicted in Fig. 1. In Col. 4 Lines 21-31 and Col. 5 Lines 10-12 Cliff discloses that device 1 may also function as a wristwatch, which is therefore worn by the user. In addition, Cliff teaches that device 1 may have a number of sensors, such as a temperature, perspiration, and pulse, as disclosed in Col. 6 Lines 6-26.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user identification and user reaction method, as taught by Obrador and Lu, with the method of monitoring a user by way of a sensor, as taught by Cliff, because a device in close proximity to the user would provide a user response by monitoring the users state of well being or physical behavior, which would require little effort from the user, as described by Cliff in Col. 5 Lines 41-45).

54. In regards to Claim 30, Obrador and Lu teach the apparatus of Claim 26, but do not teach wherein the mechanism to collect the user's response further comprises one or more sensors.

In a similar field of invention, Cliff teaches an apparatus for monitoring the reaction of people to a performance using two or more monitoring devices of different types, one of these devices is depicted in Fig. 1. In addition, Cliff teaches that device 1 may have a number of sensors, such as a temperature, perspiration, and pulse, as disclosed in Col. 6 Lines 6-26.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user identification and user reaction method, as taught by Obrador and Lu, with the method of user identification using a portable device that consists of a biometric identification device, as taught by Cliff, because a portable device in close proximity to the user would provide user response by monitoring the users state of well being or physical behavior, which would require little effort from the user, as described by Cliff in Col. 5 Lines 41-45).

55. Claims 38, 40, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Vetro et al US Patent Application Publication (2003/0156108 A1).

56. In regards to Claim 38, 40, and 41, Obrador teaches an article comprising a machine-accessible medium having associated data representing digital content and meta-data associated with the digital content wherein the meta-data comprises one or more annotations representing a user's response to the digital content (operations of computer 140, as described in Col. 3 Lines 56-64). Obrador does not teach a data structure comprising a first field containing data representing digital content, and a second field containing data representing meta-data associated with the digital content. Nor does Obrador teach wherein the data representing the digital content is a Digital Item or wherein the data representing meta-data is stored using a schema based on MPEG-21.

In a similar field of invention, Vetro teaches, as prior art, a digital item 100 as part of the MPEG-21 framework, which includes one or more resources 110, associated descriptors 120, and structure 130, as shown in Fig. 1. Vetro further discloses that resources 110 can include individual multimedia assets 111 (such as MPEG video) and that descriptors 120 include descriptive information about the internals of the resource (such as an MPEG-7 description), as disclosed in Paragraph [0006].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the article for indexing media as taught by Obrador with the data structure in the form of a MPEG-21 Digital Item as taught by Vetro because, as disclosed by Vetro, “One fundamental advantage of the digital item 100 is that it can aggregate multiple different resources into a single logical unit, or package, with a rich set of descriptive information” as stated in Paragraph [0007]. In addition, Vetro discloses "A second fundamental advantage of the digital item is that it is self-describing and configurable” as stated in Paragraph [0008]. A digital item with a resource and a descriptor, as described by Vetro, would therefore provide a versatile data structure that could easily be identified by a variety of devices.

57. In regards to Claim 42, Obrador and Vetro teach the article of Claim 38 wherein the machine-accessible media further includes data, wherein the data comprises a data structure for use by the machine, wherein the annotation identifies an event (Obrador teaches: operations of computer 140, as described in Col. 3 Lines 56-64; with further reference to Col. 7 Lines 4-21).

58. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Vetro et al US Patent Application Publication (2003/0156108 A1) in further view of “Reconciling MPEG-7 and MPEG-21 Semantics through a Common Event-Aware Metadata Model” by Hunter.

59. In regards to Claim 39, Obrador and Vetor teach the article of Claim 38, but do not teach wherein the machine-accessible media further includes data, wherein the data comprises a data structure for use by the machine, the data structure comprising a third field containing data representing an originator of the digital content.

It is well know in the art that meta-data may be represented using the MPEG-7 standard. Hunter describes the Usage description tool of MPEG-7, which "describe[s] when, where, how, and by whom the multimedia content has been used" (as disclosed in the second paragraph of Hunter's Introduction). The Examiner interprets the "where" of this section to be equivalent to Applicants "originator" of media content.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the article for indexing media as taught by Obrador using Vetro's digital item data structure (comprising MPEG-7 descriptors) because Hunter shows that MPEG-7 data structures inherently have the capability of tracking location or origin data using the Usage description tool.

60. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view of Vetro et al US Patent Application Publication (2003/0156108 A1) in further view Eldering et al. US Patent (7,150,030 B1) hereinafter "Eldering."

61. In regards to Claims 43 and 44, Obrador and Vetor teach the article of Claim 38, but do not teach wherein the machine-accessible media further includes data, wherein the data comprises a data structure for use by the machine, wherein the data structure representing meta-data comprises responses from multiple users or wherein the data representing meta-data comprises statistical summaries of response from multiple users.

In a similar field of invention, Eldering teaches a subscriber characterization system that uses heuristic rules or conditional probabilities to aid in the generation of an interest profile. A household interest profile 180, as shown in Fig. 17, is generated using process 1600 of Fig. 16, as described in Col. 13 Lines 41-67). As shown in Fig. 17, the average value 1703 and session value 1705 of various household interests are generated using the process of Fig. 16.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the article for indexing media as taught by Obrador using Vetro's digital item data structure with the subscriber characterization system of Eldering because, as Eldering discloses "the heuristic rules in logical form allow the system to apply generalizations which have been learned from external studies to obtain a characterization of the subscriber" from Col. 2 Lines 24-27. Constructing a subscriber characterization system using conditional probabilities, as disclosed by Eldering, would therefore provide a general user profile representing the likes and dislikes of the majority of users.

62. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obrador US Patent (6,585,521 B1) in view Schlack et al. US Patent (7,260,823 B2).

63. In regards to Claim 49, Obrador teaches the computerized method of Claim 48, but does not teach wherein consolidating the meta-data s performed when a network is idle.

In a similar field of invention, Schlack teaches a viewer characterization and profiling system based on the viewer's interactivity with a television, which is used to create a user profile initially stored in STB [Set-Top Box] 220. Schlack's method involves aggregating user data from each STB in order to form groups of viewers with similar characteristics. Schlack further discloses in Col. 36 Lines 55-60 that "the signature profiles stored in STB 220 may be transmitted to the HE [Head End] at determined in intervals (i.e. every night at off-peak hours, every week)."

It would have been obvious to one of ordinary skill in the art at the time of the invention to combined the user monitoring method of Obrador with the method of data aggregation during off-peak hours, as taught by Schlack because there is a high likelihood that network traffic will be at a minimum during off-peak hours of operation. Performing the aggregation process during off-peak hours would therefore increase the available bandwidth on the network during peak usage hours.

Conclusion

64. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, as listed below.

65. Zawilinski US Patent (5,676,138) teaches a multimedia computerized system for detecting the emotional responses of a viewer and the changes in response over time. In addition, Zawilinski teaches a number of measuring devices for measuring and recording a plurality of values associated with each of a plurality of physiological variables. Statistical calculations are used to generate a descriptor for an associated emotional response.

66. Dimitrova et al. US Patent Application Publication (2003/0093784 A1) teach a television audience feedback collection system and a method for using human response inputs to automatically create a viewer profile. Dimitrova uses a number of viewer feedback sensors in order to provide an unobtrusive and automatic method of gauging audience reaction to audio-visual content.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICK A. RYAN whose telephone number is (571)270-5086. The examiner can normally be reached on Mon to Thur, 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. A. R./
Examiner, Art Unit 2623
Thursday, February 21, 2008

SCOTT E. BELIVEAU
PRIMARY PATENT EXAMINER